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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,174	07/26/2001	Jochen Burgdorf	AP9974/64098-878	7113

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/916,174	<b>Applicant(s)</b> BURGDORF ET AL.	
	<b>Examiner</b> Lan Nguyen	<b>Art Unit</b> 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19,20,22-38 and 41-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19,20,22-38 and 41-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 1/20/2004. These drawings contain the changes that were approved by Examiner Burch on 10/15/03. However, the amendment dated 1/20/04 was denied entry by Examiner Burch as indicated in the Advisory Action dated 2/19/04. It is recommended that Applicant re-submit said drawings in a reply to this Office Action so that said drawings can properly be entered into the record of the instant application.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 19, 20, 22-38 and 41-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- In claim 19, line 15, the claimed feature "actively lifting the at least one actuating device" should be -- actively lifting the first brake pad--.

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- In claim 41, lines 18-19, the claimed feature “actively lifting the at least one actuating device” should be -- actively lifting the first brake pad--.
- In claim 42, line 18, the claimed feature “actively lifting the at least one actuating device” should be -- actively lifting the first brake pad--.
- In claim 43, line 17-18, the claimed feature “actively lifting the at least one actuating device” should be -- actively lifting the first brake pad--.

Claims 19, 41-43 are treated as having the claimed feature -- actively lifting the first brake pad--.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 19, 20, 22-38 and 41-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 19, lines 8-9, “such that it preclude” should be --to preclude--.
- Claim 19, line 11, “a shackle” should be --said shackle--.
- Claim 19, line 13, “said carrier plate” should be --said carrier plate portion--.
- Claim 24, line 2, “its free end” should be --a free end--.
- Claim 24, line 3, “the first leg” (two occurrences) should be --the first leg portion--.
- Claim 33, line 4, “or” renders claim 33 indefinite.
- Claim 41, lines 19 and 24, “its free end” should be --a free end--.
- Claim 41, line 28, “the grooved-shaped indentations” should be --two grooved-shaped indentations of the at least one grooved-shaped indentation--. Claim 41

is being treated as having the claimed feature: -- the grooved-shaped indentation -- (singular).

- Claim 42, line 16, "in order to provide" should be --provides--.
- Claim 42, lines 18 and 24, "its free end" should be --a free end--.
- Claim 42, line 28, "or" renders claim 42 indefinite.
- Claim 42, line 28, "the grooved-shaped" should be --the at least one grooved-shaped--.
- Claim 43, line 27, "or" renders claim 43 indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 19, 20, 22-25 and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin.

RE: claim 19, Martin shows a spot-type disc brake assembly, as in the present invention, comprising: a brake housing; at least one actuating device 90 arranged in the brake housing to apply an actuating force to a first brake pad 100,101 detachably connected to the at least one actuating device; a second brake pad 100,101 detachably connected to the at least one actuating device and anchored axially on the brake housing; and a spring assembly 131,134 having a design that actively lifts and provides

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a clearance for the first brake pad, see column 5, lines 52-58, wherein the spring assembly is arranged against said first brake pad to preclude an unsymmetrical load on the first brake pad, wherein the spring assembly includes: a first leg portion, on the left engaged with shackle 130, which is detachably hooked to a shackle 130 of a carrier plate portion 100 of the first brake pad, wherein a shackle is disposed on a first side of the carrier plate portion opposing a frictional lining portion 101 of the first brake pad, wherein said frictional lining portion is secured on a second side of said carrier plate, wherein said frictional lining portion provides a point of force that radially overlaps a spring force that is exerted on a contact area of the first brake pad for actively lifting the first brake pad after a braking application wherein the first leg portion of the spring assembly is supported on the first brake pad in a circumferential direction traversing a central plane of the at least one actuating device, as shown in figures 4 and 5.

Re: claim 20, Martin shows spring 131 in indentation 132.

Re: claim 22, Martin shows a second leg portion hooked into a bore of another shackle 134, shackle 134 is considered a portion of the housing.

Re: claim 23, Martin shows the spring 131 located in a recess 132A between the two pistons 90.

Re: claims 24 and 25, Martin shows first leg, second leg and shackle 130 as claimed.

Re: claims 35, 36 and 37, Martin shows the spring 131 as claimed.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 26-34, 38 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Spedding et al.

Re: claims 26 and 38, Martin's brake assembly, as rejected in claim 19, shows spring 131 with a second leg portion which includes the portion that hooks onto the shackle 134, shackle 134 and a bolt going through the wall behind the pistons 90, as shown in figure 4. Martin lacks the two spring arms and an "S" shape middle portion. Spedding et al. teach the structure of a flat spring with spring arms in "S" shape in the figures. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Martin's brake assembly with Spedding's spring in order reduce the weight of the spring which in turn would reduce the weight of the brake assembly, as taught by Spedding in column 1, lines 14-21.

Re: claims 27 and 28, Martin shows the at least one grooved-shaped indentation where the head of the bolt of the shackle 134 is received. It is old and well known to machine or to cast metal to achieve grooved-shaped indentations in a metal housing.

Re: claims 29-32, where the spring 131 hooks into shackle 134 is considered the first matingly configured fastening portion of the second leg portion. The bolt of the shackle 134 received in the grooved-shaped indentation in the housing is considered

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the second matingly configured fastening portion of the second leg portion. As shown, said bolt goes through a bore in the housing.

Re: claims 33 and 34, Martin further shows pocket 132 adjacent recess 132A. It is old and well known to machine or to cast metal to achieve pockets and recesses in a metal housing.

Re: claim 41, the discussion of the rejection of claims 19, 24, 26, 28 and 30 meet all the claimed limitations of claim 41.

Re: claim 42, the discussion of the rejection of claims 19, 24, 26, 28, 29 and 31 meet all the claimed limitations of claim 42.

Re: claim 43, the discussion of the rejection of claims 19, 24, 26, 33 and 34 meet all the claimed limitations of claim 43.

### ***Remarks***

10. It is noted that Applicant uses the verb "lift" to describe the action of the springs 8, 18, 19, 31 and 33 wherein said springs actively move the brake pad 5 horizontally away from the rotor, not shown, after each braking application. Because the verb "lift" is normally used for moving objects vertically, the Examiner would like to clarify that in the instant application, the verb "lift" has been used to describe the action of the springs 8, 18, 19, 31 and 33 wherein said springs actively move the brake pad 5 horizontally away from the rotor, not shown, after each braking application.



***Response to Arguments***

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

12. The Examiner regretfully withdraws the indication of allowable subject matters as stated in the Final Rejection dated 10/17/03 because of the new ground of rejection; and apologizes for any inconveniences this might have caused.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oshima show a brake assembly with an assembly of two return springs 9 wherein the spring structure is similar to the spring of the instant invention. Henley shows a spring with a turn in order to accommodate a different actuation direction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
*Lan Nguyen*  
Patent Examiner  
A. U. 3683